

Linzer biol. Beitr.	45/2	2121-2126	20.12.2013
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## **A study on Coccinellidae (Coleoptera: Cucujoidea) from Varamin and vicinity, Iran**

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**A b s t r a c t :** The fauna of Coccinellidae (Coleoptera) from Varamin and vicinity (Tehran province) is studied in this paper. In total 11 species from the subfamilies Chilocorinae, Coccinellinae and Scymninae were collected and identified.

**K e y w o r d s :** Coleoptera, Cucujoidea: Coccinellidae, Ladybirds, Varamin, Iran.

### **Introduction**

Coccinellidae (Coleoptera) are a large family with about 6,000 species described worldwide (VANDEMBERG 2002, KOVÁŘ 2007). Most species of this family are beneficial insects because they are predators of several agricultural pests (GORDON 1985; DIXON 2000). They can have efficient role in biological control in agricultural and forest ecosystems, which if they are conserved, they can decrease the population density of pests successfully (OBRYCKI & KRING 1998; MAJERUS 1994; MAJERUS & KERANS 1989). The fauna of Iranian Coccinellidae was studied rather well (FATEMI 1983; YAZDANI 1990; SADEGHI 1991; MOSSADEGH & KOCHEILI 1993; HAJI ZADE 1995; MODARRES AWAL 1997; MAFI 1997; YAGHMAEE & KHARAZI-PAKDEL 1998; HAJI ZADE et al. 2001; JAFARI & KAMALI 2007; ESFANDIARI et al. 2008; GHAHARI & TABARI 2008; FARAHI & SADEGHI NAMGHI 2009; GHAHARI et al. 2009; ANSARI POUR 2010; JAFARI et al. 2011; ANSARI POUR & SHAKARAMI 2011), but Iran is a large country with various climates; therefore the fauna of Iranian Coccinellidae is more diverse than what have been reported so far. The goal of this paper is faunistic study on the Coccinellidae from Varamin and vicinity.

### **Materials and Methods**

The specimens of this research were collected by sweeping net and aspirator from Varamin and vicinity (including, Ali-Abad, Asgar-Abad, Bagher-Abad, Ghaleh-Khajeh, Gharchak, Haji-Abad, Javad-Abad, Pishva, Sharif-Abad, Taghi-Abad). The materials were identified by using of some identification keys and also were compared with the determined materials by the authorized specialists. The specimens are preserved in the collection of the author. Classification, nomenclature and distribution suggested by MAJERUS (1994) and CANEPARI (2011) have been followed.

## Species list

Totally 11 species of Coccinellidae from the genera *Adalia*, *Chilocorus*, *Coccinella*, *Exochomus*, *Hippodamia*, *Oenopia*, *Scymnus* and *Stethorus* were collected and identified from Varamin and vicinity.

### Subfamily Chilocorinae

#### Tribe Chilocorini

##### Genus *Chilocorus* LEACH

###### *Chilocorus bipustulatus* (LINNEAUS 1758)

Material examined: Ghaleh-Khajeh, (2), May 2010. Varamin, (2), June 2011.

Distribution: All of Europe (except northern parts), Mediterranean Region, Palaearctic Asia and U.S.A.

##### Genus *Exochomus* REDTENBACHER

###### *Exochomus nigripennis* (ERICHSON 1843)

Material examined: Asgar-Abad, (4), April 2010.

Distribution: Palaearctic, Africa, India, Pakistan.

###### *Exochomus pubescens* (KUSTER 1848)

Material examined: Ghaleh-Khajeh, (2), June 2010. Taghi-Abad, (1), July 2010.

Distribution: India, Pakistan, Spain, North Africa, Greece, Egypt, Syria, Palestine.

### Subfamily Coccinellinae

#### Tribe Coccinillini

##### Genus *Coccinella* (LINNEAUS)

###### *Coccinella septempunctata* LINNEAUS 1758

Material examined: Ali-Abad, (1), May 2010. Javad-Abad, (5), May 2010. Asgar-Abad, (4), April 2010. Ghaleh-Khajeh, (2), June 2010. Gharchak, (10), June 2010. Pishva, (7), June 2010. Haji-Abad, (3), July 2010. Taghi-Abad, (4), July 2010. Varamin, (6), September 2010. Varamin, (5), June 2011.

Distribution: Palaearctic Region (China and Japan included), India, Bangladesh, imported in the U.S.A.

###### *Coccinella undecimpunctata* LINNEAUS 1758

Material examined: Javad-Abad, (3), July 2010.

Distribution: Europe, Island (Sicily), in the Middle East, North Africa, Arabia, Iran, Iraq, Afghanistan and central Asia.

**Genus *Adalia* (MULSANT)**

***Adalia bipunctata* (LINNAEUS 1758)**

M a t e r i a l e x a m i n e d : Gharchak, (3), May 2010. Pishva, (2), June 2010.

D i s t r i b u t i o n : Holarctic Region (Azores Islands and North Africa included), Asia and Chile (Tierra del Fuego).

**Genus *Hippodamia* DEJEAN**

***Hippodamia (Adonia) variegata* (GOEZE 1777)**

M a t e r i a l e x a m i n e d : Haji-Abad, (4), September 2010. Gharchak, (2), April 2011.

D i s t r i b u t i o n : Palaearctic Region, eastern and southern Africa.

**Genus *Oenopia* MULSANT**

***Oenopia conglobata* LINNEAUS 1758**

M a t e r i a l e x a m i n e d : Bagher-Abad, (1), August 2010. Pishva, (2), April 2011.

D i s t r i b u t i o n : Europe and Asia.

**Subfamily S c y m n i n a e**

**Tribe S t e t h o r i n i**

**Genus *Stethorus* WEISE**

***Stethorus gilvifrons* (MUKSANT 1850)**

M a t e r i a l e x a m i n e d : Taghi-Abad, (2), August 2010.

D i s t r i b u t i o n : Mediterranean Region, Middle East, Saudi Arabia, Pakistan, Kashmir, India and Oriental Region.

**Tribe S c y m n i n i**

**Genus *Scymnus* KUGELANN**

***Scymnus syriacus* MARSEUL 1868**

M a t e r i a l e x a m i n e d : Sharif-Abad, (3), June 2010.

D i s t r i b u t i o n : Eastern Mediterranean region especially Jordan, Lebanon, Turkey, Iran, Libya, Yemen and Egypt.

***Scymnus flavidollis* REDTENBACHER 1843**

M a t e r i a l e x a m i n e d : Gharchak, (4), May 2010.

D i s t r i b u t i o n : Holarctic Region.

## Discussion

The fauna of Iranian Coccinellidae was studied rather well (see references), and although there is not any impressive list on this family, but nearly 150 species have been recorded from Iran so far (GHAHARI 2012). However this short paper can be useful for determining the distribution of Iranian Coccinellidae and completing the distribution map. Coccinellids are the most important and powerful predators of hemipteran pests including, aphids, mealybugs, scale insects and whiteflies (OBRYCKI & KRING 1998; RAIMUNDO et al. 2008) which are destructive agricultural pests in Iran (BEHDAD 1991; KHANJANI 2004, 2006). Unfortunately a large amount of various pesticides are used for control of the mentioned pests in Iran, while almost pesticides have lethal effect on natural enemies such as coccinellids. Therefore, farmers must be trained for conservation of natural enemies and supporting of beneficial insects.

## Acknowledgements

This research was supported by the Islamic Azad University (Young Researchers Club and Elites, Tehran Science and Research Branch). The authors thank to Dr. H. Fürsch and Dr. H. Ghahari for providing the necessary papers and help for identification.

## Zusammenfassung

Vorliegende Arbeit behandelt die Coccinelliden-Fauna (Coleoptera, Coccinellidae) von Varamin und Umgebung in der iranischen Provinz Teheran. 11 Arten der Unterfamilien Chilocorinae, Coccinellinae und Scymninae konnten gesammelt und bestimmt werden.

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